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TI GAS SENSOR
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PA YAZAKI CORP
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SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1990
AB PURPOSE: To obtain a gas sensor having high sensitivity and responding rapidly irrespective of the direction of a change in the air fuel ratio, by using a perovskite type composite oxide having Sr, Y and SnO.
CONSTITUTION: Strontium carbonate as a material containing strontium, an yttrium oxide as a material containing yttrium, and a tin oxide as a material containing tin, which is obtained by dissolving metal tin in a nitric acid and by heating a tin nitrate solution thus obtained, are dried to the full respectively and then measured stoichiometrically, and the mixture of these materials are crushed together by using a vibration mill. Subsequently, a crushed substance thus obtained is formed into a tablet, put in an electric furnace and baked for 20 hours at a temperature of 1,200°C, and thereby a sintered body of a composite oxide is obtained. The sintered body thus obtained is made into fine powder; the powder is put in a mold and pressed, so as to prepare a molded body. Next, this molded body is baked and thereby a sensor element is obtained. The element is made up of an oxide having $\text{Sr}_{1-x}\text{Y}_3\text{Sn}_d\text{O}_{3-d}$, where $0 < x \leq 0.4$ and $0 < d < 1$.
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